UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
UNELUS, ERNEST

ART UNIT	PAPER NUMBER
2181	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/12/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

	Application No.	Applicant(s)
Office Action Summary	10/829,008	LEAMING, TAYLOR J.
	Examiner	Art Unit	
	Ernest Unelus	2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>27 October 2006</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,5-13,16-35 and 38-50* is/are pending in the application.

    4a) Of the above claim(s) *3,4,14,15,36, and 37* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,5-13,16-35 and 38-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>01 July 2004</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____ .

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____ .

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____ .

DETAILED ACTION

RESPONSE TO AMENDMENT

Claim rejections based on prior art

Applicant's arguments filed 10/27/2006 have been fully considered but they are not persuasive.

The applicant argues that the Maier reference did not discloses a system utilization metric exceeding a threshold.

Maier discloses a negotiation flag (see par. 0041), which is being use as a metric. The metric exceeding a threshold is the negotiation flag moving from not active-to-active. As stated in paragraphs (steps) 0042 to 0049, the negotiation flag getting to an active state is exceeding a threshold. The claim language doesn't specifically express what is the metric and how the metric exceeds a threshold.

In regards to the newly added claims 45-50, they are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: "based upon an occurrence of attempted unauthorized communications" is distinct from "based upon a system utilization metric exceeding a threshold"

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 45-50 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

The terminal disclaimer filed on 10/27/06 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of

application # 10/829,008 has been reviewed and is accepted. The terminal disclaimer has

been recorded.

I. INFORMATION CONCERNING OATH/DECLARATION

Oath/Declaration

1.   The applicant's oath/declaration has been reviewed by the examiner and is found to

conform to the requirements prescribed in **37 C.F.R. 1.63.**

II. INFORMATION CONCERNING DRAWINGS

Drawings

2.   The applicant's drawings submitted are acceptable for examination purposes.

III. ACKNOWLEDGEMENT OF REFERENCES CITED BY APPLICANT

3.   As required by **M.P.E.P. 609(C)**, the applicant's submissions of the Information

Disclosure Statement dated August 05, 2004 is acknowledged by the examiner and the cited

references have been considered in the examination of the claims now pending. As required by

M.P.E.P 609 C(2), a copy of the PTOL-1449 initialed and dated by the examiner is attached to

the instant office action.

Claim Rejections - 35 USC § 102

4.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5.   **Claims 1-10, 12-21, and 44-50,** are rejected under 35 U.S.C. 102(e) as being anticipated by

Maier (US 2005/0251596) in view of Lu et al. 2005/0108571.

6.   As per **claims 1, 12, and 34,** the following multiple reference 35 U.S.C. 102(e) rejections

is made in reference to MPEP 2131.013.

Maier discloses "An integrated circuit for a smart card **(USB device in fig. 1)** and

comprising: at least one data terminal for providing communications with a host device **(see fig.**

1, which discloses communication between the smart card and host device); and a processing

system providing an attachment signal on the at least one data terminal for recognition by the

host device **(see fig. 1)**, cooperating with the host device to perform an enumeration based upon

at least one default descriptor **[descriptors (I)] (see paragraph 0043)**, and based upon a system

event, selectively removing the attachment signal from the at least one data terminal and

thereafter again providing the attachment signal on said at least one data terminal and

cooperating with the host device to perform a new enumeration based upon at least one alternate

descriptor **[descriptors (II)]**". **[(paragraph 0043 discloses "in a second enumerating step**

ENUM2, the USB host enumerates the USB device. As illustrated in FIG. 2, only the

descriptors (II) associated to the services (S1, S2, S3) which have been activated and the

descriptor associated to the standard service (S0) will be retrieved"). Maier discloses the

functionality of the smart card and fail to specifically discloses the structure of the card.
However, it is an inherent feature for the smart card to be an integrated circuit having a
data terminal for providing communications with a host device, a processor and
descriptors. For example, as evidence, Lu discloses, "An example of such a resource-
constrained device is the smart card. A smart card is simply a plastic card containing an
integrated circuit with some memory and a microprocessor. Typically the memory is
restricted to 6K bytes of RAM. It is anticipated that smart card RAM may increase by a
few kilobytes over the next few years. However, it is very likely that memory size will
continue to be an obstacle to smart card applications. Most smart cards have 8-bit
microprocessors", and paragraph 0232 and fig. 11, which further illustrate a smart card
having descriptors and at least one data terminal for providing communications with a host
device].

7.   As per **claims 2, 13, 35, 46 and 49**, Maier discloses "The integrated circuit of claim 1,"
[See

rejection to claim 1 above] "wherein further comprising at least one power terminal connected
to said processor, and wherein said processor receives power via said at least one power terminal
during removal of the attachment signal **(paragraph 0013 discloses power going though the
processor, which is an inherent feature).**

8.   As per **claims 3, 14, and 36,**, Maier discloses "The integrated circuit of claim 1," [See
rejection to claim 1 above] "wherein the system event comprises a system utilization metric
exceeding a threshold" **(with respect to this limitation, paragraph 0015 from the applicant's
specification discloses "In such case, the system utilization metric may indicate that bus**

utilization is above a threshold, which would prompt the processor to re-enumerate using one or more alternate descriptors that would allow it to more efficiently utilize the limited bandwidth". Similarly, Maier discloses, in paragraph 0055, "in a second enumerating step ENUM2, the USB host enumerates the USB device. As illustrated in FIG. 2, only the descriptors (II) associated to the services (S1, S2, S3) which have been activated and the descriptor associated to the standard service (S0) will be retrieved").

9.   As per **claims 4, 15, and 37**, Maier discloses "wherein the system event comprises the occurrence of attempted unauthorized communications" **(with respect to this limitation, paragraph 0048 from the applicant's specification discloses "Another example of a system event which may trigger a new enumeration is the occurrence of attempted unauthorized communications, at Block 61', such as would be the case when someone attempts to eavesdrop or hack into the system 20.".** Similarly, Maier discloses, in paragraph 0019, "In addition, an Internet Service Provider can, for example, define its own proprietary login application and store it on the Smart Card itself (USB device). The risk of hacking the login application is therefore reduced").

10.   As per **claims 5, 16, 38, 47, and 50**, Maier discloses "wherein said processor monitors communications with the host device during removal of the attachment signal" **(see paragraph 0034, which discloses monitoring of communication by the USB device, which inherently has a processor)**.

11.   As per **claims 6, 17, and 39**, Maier discloses "wherein the at least one alternate

descriptor comprises at least one device descriptor **(see paragraph 0008)**.

12.   As per **claims 7, 18, and 40**, Maier discloses "wherein the at least one alternate

descriptor comprises at least one configuration descriptor **(see paragraph 0009)**.

13.   As per **claims 8, 19, and 41**, Maier discloses "wherein the at least one alternate

descriptor comprises at least one interface descriptor **(see paragraph 0010)**.

14.   As per **claims 9, 20, and 42**, Maier discloses "wherein the at least one alternate

descriptor comprises at least one endpoint descriptor **(see paragraph 0011)**.

15.   As per **claims 10, 21, and 43**, Maier discloses "wherein said at least one data terminal

comprises first and second data terminals for differential data signals" **(see fig. 2 and Paragraph

0058)**.

16.   As per **claim 44**, Maier discloses "wherein the smart card operate in a universal serial bus

(USB) mode" **(Paragraph 0077 discloses the USB device using different protocol such

firewire, which is a Universal Serial Bus version 2.0 (USB)**.

6.   As per **claims 45 and 48**, the following multiple reference 35 U.S.C. 102(e) rejections is

made in reference to MPEP 2131.013.

     Maier discloses "An integrated circuit for a smart card **(USB device in fig. 1)** and

comprising: at least one data terminal for providing communications with a host device **(see fig.**

1, which discloses communication between the smart card and host device); and a processing

system providing an attachment signal on the at least one data terminal for recognition by the

host device **(see fig. 1)**, cooperating with the host device to perform an enumeration based upon

at least one default descriptor **[descriptors (I)] (see paragraph 0043)**, and based upon an

occurrence of attempted unauthorized communications, **(with respect to this limitation,**

paragraph 0048 from the applicant's specification discloses "Another example of a system

event which may trigger a new enumeration is the occurrence of attempted unauthorized

communications, at Block 61', such as would be the case when someone attempts to

eavesdrop or hack into the system 20.". Similarly, Maier discloses, in paragraph 0019, "In

addition, an Internet Service Provider can, for example, define its own proprietary login

application and store it on the Smart Card itself (USB device). The risk of hacking the

login application is therefore reduced"), selectively removing the attachment signal from the

at least one data terminal and thereafter again providing the attachment signal on said at least one

data terminal and cooperating with the host device to perform a new enumeration based upon at

least one alternate descriptor **[descriptors (II)]". [(paragraph 0043 discloses "in a second**

enumerating step ENUM2, the USB host enumerates the USB device. As illustrated in

FIG. 2, only the descriptors (II) associated to the services (S1, S2, S3) which have been

activated and the descriptor associated to the standard service (S0) will be retrieved").

Maier discloses the functionality of the smart card and fail to specifically discloses the

structure of the card. However, it is an inherent feature for the smart card to be an

integrated circuit having a data terminal for providing communications with a host device,

a processor and descriptors. For example, as evidence, Lu discloses, "An example of such a

resource-constrained device is the smart card. A smart card is simply a plastic card

containing an integrated circuit with some memory and a microprocessor. Typically the

memory is restricted to 6K bytes of RAM. It is anticipated that smart card RAM may

increase by a few kilobytes over the next few years. However, it is very likely that memory

size will continue to be an obstacle to smart card applications. Most smart cards have 8-

bit microprocessors", and paragraph 0232 and fig. 11, which further illustrate a smart card

having descriptors and at least one data terminal for providing communications with a host

device].

Rejections - 35 USC § 103

17.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

18.   **Claims 11 and 22-33** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Maier (US 2005/0251596) in view of Lu et al. 2005/0108571.

19.   As per **claims 11, 22, and 33,** Maier discloses "A smart card system including an

integrated circuit of claim 1, **[see rejection to claim 1 above]**, but fail to specifically disclose a

USB transceiver connected between said processor and said at least one data terminal.

Lu discloses a USB transceiver **(BSD socket API 1105 in fig. 11)** connected between

said processor (**communication module 1103 in fig. 11**) and said at least one data terminal

(**Internet application 1101 in fig. 11**) (**see paragraph 0025**).

Maier (US 2005/0251596) and Lu et al. (US 2005/0108571) are analogous art because

they are from the same field of endeavor of communication between a smart card and a

computer.

At the time of the invention it would have been obvious to a person of ordinary skill in

the art to modify the system comprising a main device and an auxiliary device arranged to co-

operate with each other as taught by Maier and an infrastructureless resource-constrained device,

for example, a smart card, capable of acting as a full-fledged network node providing secure

communication to other nodes on the network and in which the security boundary is located on

the infrastructureless resource-constrained device as taught by Lu

The motivation for doing so would have been because Lu teaches that determining

whether there is enough free space in memory before transferring data **["Such**

infrastructureless resource-constrained devices can easily be adapted so that the resource-

constrained device can

provide many of the functions traditionally associated with full-fledged network nodes"

(**see paragraph 0022**)].

Therefore, it would have been obvious to combine Maier (US 2005/0251596) and Lu et

al. (2005/0108571) for the benefit of creating a smart card to communicate with a host to obtain

the invention as specified in claims 11, 22 and 33.

20.   As per **claim 23,** Maier discloses "A smart card system **(USB device in fig. 1)**

comprising: a host device **(USB host device in fig. 1)** comprising: at least one data terminal for

providing communications with a host device **(see fig. 1, which discloses communication**

between the smart card and host device); and a processing system providing an attachment

signal on the at least one data terminal for recognition by the host device **(see fig. 1)**, cooperating

with the host device to perform an enumeration based upon at least one default descriptor

[descriptors (I)] (see paragraph 0043), and based upon a system event, selectively removing

the attachment signal from the at least one data terminal and thereafter again providing the

attachment signal on said at least one data terminal and cooperating with the host device to

perform a new enumeration based upon at least one alternate descriptor **[descriptors (II)]".**

[(paragraph 0043 discloses "in a second enumerating step ENUM2, the USB host

enumerates the USB device. As illustrated in FIG. 2, only the descriptors (II) associated to

the services (S1, S2, S3) which have been activated and the descriptor associated to the

standard service (S0) will be retrieved"). Maier discloses the functionality of the smart card

and fail to specifically discloses the structure of the card. However, it is an inherent feature

for the smart card to be an integrated circuit having a data terminal for providing

communications with a host device, a processor and descriptors. For example, as evidence,

Lu discloses, "An example of such a resource-constrained device is the smart card. A

smart card is simply a plastic card containing an integrated circuit with some memory and

a microprocessor. Typically the memory is restricted to 6K bytes of RAM. It is anticipated

that smart card RAM may increase by a few kilobytes over the next few years. However, it

is very likely that memory size will continue to be an obstacle to smart card applications.

Most smart cards have 8-bit microprocessors", and paragraph 0232 and fig. 11, which

further illustrate a smart card having descriptors and a data terminal for providing

communications with a host device]. In regards to the adapter, Maier clearly fails to

specifically disclose a card adapter connected to the host.

Lu discloses a card adapter connected to a smartcard comprising an integrated circuit (see

paragraph ooo4 and fig. 1)

Maier (US 2005/0251596) and Lu et al. (US 2005/0108571) are analogous art because

they are from the same field of endeavor of communication between a smart card and a

computer.

At the time of the invention it would have been obvious to a person of ordinary skill in

the art to modify the system comprising a main device and an auxiliary device arranged to co-

operate with each other as taught by Maier and an infrastructureless resource-constrained device,

for example, a smart card, capable of acting as a full-fledged network node providing secure

communication to other nodes on the network and in which the security boundary is located on

the infrastructureless resource-constrained device as taught by Lu

The motivation for doing so would have been because Lu teaches that determining

whether there is enough free space in memory before transferring data ["The smart card reader

215(6b) provides an implementation of the Peer I/O Server 613(6b), described in greater

detail herein below. The smart card reader 215(6b) connects to the smart card 201(6b)

through an ISO standard half-duplex I/O interface and to a host computer 217(6b) via a

standard full-duplex I/O interface 607. Because the smart card reader 215(6b) completely

handles the ISO 7816 protocol, and connects to the host computer 217(6b) using standard

serial protocol, no additional software, beyond that which is normally found on

a PC, is needed on the host PC 217(6b)"].

Therefore, it would have been obvious to combine Maier (US 2005/0251596) and Lu et

al. (2005/0108571) for the benefit of creating a smart card to communicate with a host to obtain

the invention as specified in claim 23.

21.   As per **claim 24**, the combination of Maier and Lu discloses "The smart card system of

claim 23," **[See rejection to claim 23 above]** Maier further discloses "comprising at least one

power terminal connected to said processor, and wherein said processor receives power via said

at least one power terminal during removal of the attachment signal" **(with respect to this

limitation, paragraph 0013 discloses power going though the processor, which is an

inherent feature)**

22.   As per **claim 25**, the combination of Maier and Lu discloses "The smart card system of

claim 23," **[See rejection to claim 23 above]** Maier further discloses "a system utilization metric

exceeding a threshold" **(with respect to this limitation, paragraph 0015 from the applicant's

specification discloses "In such case, the system utilization metric may indicate that bus

utilization is above a threshold, which would prompt the processor to re-enumerate using

one or more alternate descriptors that would allow it to more efficiently utilize the limited

bandwidth". Similarly, Maier discloses, in paragraph 0055, "in a second enumerating step

ENUM2, the USB host enumerates the USB device. As illustrated in FIG. 2, only the

descriptors (II) associated to the services (S1, S2, S3) which have been activated and the

descriptor associated to the standard service (S0) will be retrieved").**

23.   As per **claim 26**, the combination of Maier and Lu discloses "The smart card system of

claim 23," **[See rejection to claim 23 above]** Maier further discloses "wherein the system event

comprises the occurrence of attempted unauthorized communications" **(with respect to this**

limitation, paragraph 0048 from the applicant's specification discloses "Another example

of a system event which may trigger a new enumeration is the occurrence of attempted

unauthorized communications, at Block 61', such as would be the case when someone

attempts to eavesdrop or hack into the system 20.". Similarly, Maier discloses, in

paragraph 0019, "In addition, an Internet Service Provider can, for example, define its own

proprietary login application and store it on the Smart Card itself (USB device). The risk

of hacking the login application is therefore reduced").

24.   As per **claim 27**, the combination of Maier and Lu discloses "wherein said processor

monitors communications with the host device during removal of the attachment signal" **(with**

respect to this limitation, see Maier, paragraph 0034, which discloses monitoring of

communication by the USB device, which inherently has a processor).

25.   As per **claim 28**, the combination of Maier and Lu discloses "The smart card system of

claim 23," **[See rejection to claim 23 above]** Maier further discloses "wherein the at least one

alternate descriptor comprises at least one device descriptor" **(see paragraph 0008).**

26.   As per **claim 29**, the combination of Maier and Lu discloses "The smart card system of

claim 23," **[See rejection to claim 23 above]** Maier further discloses "wherein the at least one

alternate descriptor comprises at least one configuration descriptor"**(see paragraph 0009).**

27.   As per **claim 30**, the combination of Maier and Lu discloses "The smart card system of

claim 23," **[See rejection to claim 23 above]** Maier further discloses "wherein the at least one

alternate descriptor comprises at least one interface descriptor" **(see paragraph 0010).**

28.   As per **claim 31**, the combination of Maier and Lu discloses "The smart card system of

claim 23," **[See rejection to claim 23 above]** Maier further discloses "wherein the at least one

alternate descriptor comprises at least one endpoint descriptor" **(see paragraph 0011).**

29.   As per **claim 32**, the combination of Maier and Lu discloses "The smart card system of

claim 23," **[See rejection to claim 23 above]**, Maier further discloses "wherein said at least one

data terminal comprises first and second data terminals for differential data signals" **(see fig. 2**

and Paragraph 0058).

IV. RELEVANT ART CITED BY THE EXAMINER

30.   The following prior art made of record and not relied upon is cited to establish the level

of skill in the applicant's art and those arts considered reasonably pertinent to applicant's

disclosure. See **MPEP 707.05(c).**

31.   The following reference teaches a USB smart card in communication with a USB host.

U.S. PATENT NUMBER

US 2001/0056539

US 5,568,179

PCT/IB03/02801

V. CLOSING COMMENTS

Conclusion

a. STATUS OF CLAIMS IN THE APPLICATION

32.   The following is a summary of the treatment and status of all claims in the application as

recommended by **M.P.E.P. 707.07(i)**:

a(1) CLAIMS REJECTED IN THE APPLICATION

33.   Per the instant office action, claims 1, 2, 5-13, 16-35, and 38-50 have received a final

action on the merits.

. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from

the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the

mailing date of this final action and the advisory action is not mailed until after the end of the

THREE-MONTH shortened statutory period, then the shortened statutory period will expire on

the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

calculated from the mailing date of the advisory action. In no event, however, will the statutory

period for reply expire later than SIX MONTHS from the mailing date of this final action.

b. **DIRECTION OF FUTURE CORRESPONDENCES**

34.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Ernest Unelus whose telephone number is (571) 272-8596. The

examiner can normally be reached on Monday to Friday 9:00 AM to 5:00 PM.
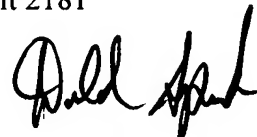
IMPORTANT NOTE

35.   If attempts to reach the above noted Examiner by telephone is unsuccessful, the

Examiner's supervisor, Mr. Fritz M. Fleming, can be reached at the following telephone number:

Area Code (571) 272-4145.

The fax phone number for the organization where this application or proceeding is

assigned is 571-273-8300. Information regarding the status of an application may be obtained

from the Patent Application Information Retrieval (PAIR) system. Status information for

published applications may be obtained from either Private PAIR or Public PAIR. Status

information for unpublished applications is available through Private PAIR only. For more

information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions

on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-

9197 (toll-free).

January 05, 2007   Ernest Unelus
                                                   Examiner
                                                   Art Unit 2181

                                                   DONALD SPARKS
                                                   SUPERVISORY PATENT EXAMINER